REMARKS

Claim Amendments

Claim 1 has been amended to recite the step of depositing the sorbent on a conveyor floor comprising a metal media having openings, and to recite the step of passing heated flowing air through the openings until the sorbent reaches a temperature of at least 700°F. These limitations have a basis at page 3, lines 10-23 of the specification and at original claim 2.

Claim 11 has been amended to recite the step of depositing the activated carbon on a conveyor floor comprising a metal media having openings, and to recite the step of passing heated flowing air through the openings. These limitations have a basis at page 3, lines 10-23 of the specification.

Claim 18 has been amended to recite the step of depositing the particulate matter on a conveyor floor comprising a metal media having openings, and to recite the step of passing heated flowing air through the openings until the particulate matter reaches a temperature of at least 700°F. These limitations have a basis at page 3, lines 10-23 of the specification and at original claim 19.

Claims 2, 4, 12 and 19 have been canceled.

Claims 3, 6, 8, 10, 11, 14, 15, 17 and 20 have been amended to remove the metric units provided in parentheses.

Claims 5 and 6 have been amended to correct dependencies in view of the cancellation of claim 4.

35 USC §102(a, b, and e) & 35 U.S.C. 103(a) Rejections

Claims 1-20 were rejected under 35 USC §102(a, b, and e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 5,556,447 to Srinivasachar *et al.*, U.S. Patent No. 5,245,120 to Srinivasachar *et al.*, U.S. Patent No. 5,803,663 to Matsuyama *et al.*, U.S. Patent No. 6,399,851 to Siddle, U.S. Patent No. 6,416,567 to Edlund *et al.*, "Regeneration of activated carbon used in the adsorption of mercury and organomercury compounds in waste gases" to Zemskov *et al.*, EP 380467 to Fercher *et al.*, JP 04-061981 to Fujita, JP 07-155722 to Hamaguchi *et al.*, JP 07-155723 to Hamaguchi *et al.*, DE 19801321 to Hoermeyer *et al.*, JP 2003-154233 to Okada, and Research Disclosure 470003 "Treatment of mercury in fly ash by the CBO process" to Cochran *et al.* In view of the above amendments, and the remarks below, reconsideration is respectfully requested.

First, looking at amended independent claims 1, 11 and 18, the claimed methods now include the step of depositing the material being treated (e.g., activated carbon) on a conveyor floor comprising a metal media having openings and passing heated flowing air through the openings to remove mercury from the material. This is advantageous in that the material being treated may be conveyed and treated at the same time. It is submitted that this new feature of amended independent claims 1, 11 and 18 is not shown or suggested in the cited references.

U.S. Patent No. 5,556,447 to Srinivasachar *et al.* describes processes for treating wastes contaminated by toxic metals. Among other things, this patent describes heating mercury-laden carbon in a small purge air flow (column 10, lines 22-26). However, this patent does not teach or suggest using a conveyor floor for the

heating as recited in amended independent claims 1, 11 and 18. Thus, the claimed invention provides advantages over the processes of this patent which do not allow for simultaneous heating and conveying.

U.S. Patent No. 5,245,120 to Srinivasachar *et al.* describes processes for treating wastes contaminated by toxic metals. However, this patent does not teach or suggest using a conveyor floor for the heating as recited in amended independent claims 1, 11 and 18. Thus, the claimed invention provides advantages over the processes of this patent which do not allow for simultaneous heating and conveying.

U.S. Patent No. 5,803,663 to Matsuyama *et al.* describes processes for treating soils contaminated by mercury. Heating is accomplished in a crucible in a heat reaction vessel (column 4, lines 44-46). Thus, this patent does not teach or suggest using a conveyor floor for the heating as recited in amended independent claims 1, 11 and 18. Therefore, the claimed invention provides advantages over the processes of this patent which do not allow for simultaneous heating and conveying.

U.S. Patent No. 6,399,851 to Siddle describes the treatment of contaminated substrate materials such as soil, sludge, sediments, drilling muds and cuttings with heat. The heating is carried out indirectly in an extraction chamber with externally applied heat (column 3, lines 57-60). Thus, this patent does not teach or suggest using a conveyor floor for the heating as recited in amended independent claims 1, 11 and 18. Therefore, the claimed invention provides advantages over the processes of this patent which do not allow for simultaneous heating and conveying.

U.S. Patent No. 6,416,567 to Edlund *et al.* describes processes for treating wastes contaminated by mercury. Heating is accomplished in an oven with a screw

auger (column 3, lines 47-56). Thus, this patent does not teach or suggest using a conveyor floor with openings for the heating as recited in amended independent claims 1, 11 and 18.

The abstract for the article entitled "Regeneration of activated carbon used in the adsorption of mercury and organomercury compounds in waste gases" by Zemskov *et al.* describes a process for treating activated carbon contaminated by mercury. This abstract describes heating mercury-laden carbon in a nitrogen flow. However, this abstract does not teach or suggest using a conveyor floor for the heating as recited in amended independent claims 1, 11 and 18. Thus, the claimed invention provides advantages over the process of this abstract which does not allow for simultaneous heating and conveying.

The abstract for EP 380467 to Fercher *et al.* describes a process for treating dust residues contaminated by, among other things, mercury. This abstract does not teach or suggest using a conveyor floor for the heating as recited in amended independent claims 1, 11 and 18. Thus, the claimed invention provides advantages over the process of this abstract which does not allow for simultaneous heating and conveying.

The abstract for JP 04-061981 to Fujita describes a process for treating incinerator ash and addresses several metals including mercury. Animal bone powder and clay is used for making an adsorbent and calcined at 1000°C. Heating is accomplished in a rotating kiln operating within a range of 1000°C to 1500°C. This abstract does not teach or suggest using a conveyor floor for the heating as recited in amended independent claims 1, 11 and 18. Thus, the claimed invention provides

advantages over the process of this abstract which does not allow for simultaneous heating and conveying.

The abstract for JP 07-155722 to Hamaguchi *et al.* describes a process for treating incinerator ash for dioxin and mercury. Heating is accomplished in an oven with a screw auger 8. This abstract does not teach or suggest using a conveyor floor for the heating as recited in amended independent claims 1, 11 and 18.

The abstract for JP 07-155723 to Hamaguchi *et al.* describes a process for treating incinerator ash for dioxin and mercury. Heating is accomplished in an oven with a screw auger 8. This abstract does not teach or suggest using a conveyor floor for the heating as recited in amended independent claims 1, 11 and 18.

The abstract for DE 19801321 to Hoermeyer *et al.* describes the treatment of mercury contaminated soils. This abstract does not teach or suggest using a conveyor floor for the heating as recited in amended independent claims 1, 11 and 18. Thus, the claimed invention provides advantages over the process of this abstract which does not allow for simultaneous heating and conveying.

The abstract for JP 2003-154233 to Okada describes a process for treating activated carbon contaminated by mercury. However, this abstract does not teach or suggest using a conveyor floor for the heating as recited in amended independent claims 1, 11 and 18. Thus, the claimed invention provides advantages over the process of this abstract which does not allow for simultaneous heating and conveying.

The Research Disclosure 470003 entitled "Treatment of mercury in fly ash by the CBO process" by Cochran *et al.* describes a process using a large fluidized bed furnace. This abstract does not teach or suggest using a conveyor floor for the heating

as recited in amended independent claims 1, 11 and 18. Thus, the claimed invention provides advantages over the process of this abstract which does not allow for simultaneous heating and conveying.

Therefore, it is respectfully submitted that all of the elements and limitations of amended independent claims 1, 11 and 18 are not shown or suggested in the cited references. Accordingly, it is believed that amended independent claims 1, 11 and 18 (and the claims that depend thereon) are patentable over the cited references.

Conclusion

It is believed that the entire application has been placed in condition for allowance. No fees are believed due. However, if any fees are needed, please charge them to deposit account 17-0055.

Respectfully submitted,

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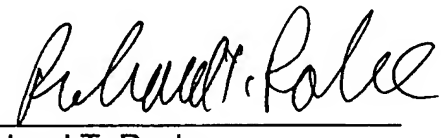
Dated: March 30, 2005

By: 

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